tions of temperature to which it is subjected have no influence on the phenomenon?

This form of barometer is found everywhere in English-speaking countries under the names of "the farmers' weather glass," "the domestic barometer," or some other equally misleading title. In some forms that the Editor has tested, there is scarcely any apparent change in the clearness of the liquid, year after year. In other instruments, the crystals of camphor assume different forms, from day to day, which are certainly very interesting to observe and study, but have nothing to do with the weather and storms, and even less than one would expect, with the current temperature. To the meteorologist and farmer, these instruments have no value, but to the student of molecular physics, they are well worth an investigation.

The gas in the space above the liquid being a mixture of air and vapor of alcohol exerts a very variable pressure upon the liquid below; the latter is saturated with the three chemicals above mentioned, but as its temperature and pressure vary, it alternately rejects and absorbs a slight surplus of camphor. The rapidity with which this change takes place appears to decide the question as to the crystalline or fibrous structure of the visible cloud. Nearly all the changes in the appearance of the camphor cloud seem to depend upon the rate at which the changes of temperature take place, and the time that is given to the solid to collect into larger crystals and settle to the bottom or rise to the top, according to the relative density of different parts of the liquid. The ascending and descending currents going on within the liquid are slow and barely appreciable, but must have an effect upon its cloudy appearance.

## AN OBJECTIONABLE NEW METEOROLOGICAL TERM.

The Weather Bureau does not adopt a new term or modify the usage of old terms until such change has come to have a well established meteorological and scientific use. Its own publications can only be made intelligible to its readers by a mutual agreement that each party adopt standard English both as to grammar and dictionary. Thus, when we predict a hurricane, it is not to be questioned that we mean an extensive, destructive storm of wind, and we do not mean a thunderstorm or a tornado, or even, necessarily, a heavy rain. When we predict thunderstorms or tornadoes, we do not mean cyclones or hurricanes or general windstorms or dust whirls. When we predict blizzards, we do not mean "snow tornadoes." This last expression is the newest addition to the sensational or Dolly Varden system of nomenclature that finds favor with some popular writers. So far as we know it first appeared in the North American Review for January, 1899, page 121, where it is used by Dr. F. L. Oswald without any special definition, as though it were a term familiar in every day use. He applies it to the front of a blizzard "that flies 400 miles farther south before it gets finally arrested for trespass on the reservation of the actual Tropics." He speaks of "the snow tornadoes that sweep from the polar regions to the very gates of the Tropics as distinctly an American institution as * * * ," and again, of "the much maligned snow tornadoes that traverse a bee line route equaling the distance from northernmost Norway to the center of the Sahara." From these three expressions we judge that the snow tornado is equivalent to what is known in America as the blizzard and in Russia as the buran.

The combination of snow and high wind, followed by very low temperatures, that constitutes the blizzard, has no right to be called a tornado. The violence of the wind does not in the slightest degree approach that of a tornado or even that of a well-developed hurricane. The wind of the blizzard is a straight-line, horizontal wind, sometimes rolling back on itself; the wind of the tornado has a steep ascent and something of a whirl round a vertical axis. In the tornado a sudden barometric depression occurs and the air within a building expands outward and tears the building to pieces; in a blizzard there is no conspicuous fall in pressure, but a rapid rise as soon as the wind strikes the station. The tornado occurs in warm weather and has its origin in a cloud immediately above the station; the blizzard occurs in cold weather and has its origin in a very extensive mass of cold, dry air.

Snow whirls, like dust whirls, have nothing tornadic in their nature or origin; they occur in connection with blizzards, but do not convert the blizzard into a tornado.

One might as well speak of a tornado as a "warm-air blizzard" as to call a blizzard a "snow tornado," and we hope that neither expression will take hold of the popular fancy. The words blizzard and cold wave have come into recognized popular and scientific use since the Weather Bureau was established in 1870; they were expressive and frequently needed as convenient terms for daily use, but we hardly see the necessity for this newest term. We are curious to learn whether there is any locality where the term "snow tornado" is in use.

For the present the MONTHLY WEATHER REVIEW will continue to use the words hurricane, typhoon, cyclone, low pressure, high pressure, thunderstorm, tornado, and blizzard in their well-recognized scientific meanings.

## WEATHER BUREAU MEN AS UNIVERSITY LECTURERS.

Many of our colleges and universities have, during the past twenty years, expressed a desire to secure instructors in meteorology, but have expressed regret that funds are not available for the establishment of full courses of instruction in the subject.

Fortunately, however, among the Weather Bureau officials may be found many who are willing to devote a portion of their time to the instruction of young men, and occasionally the employes of the Bureau receive invitations to deliver courses of lectures that must, eventually, as we fondly believe, lead to the full recognition of meteorology as an important branch of study.

The latest action in this respect has been that taken by the Board of Regents of the University of California, on June 16, when Mr. Alexander McAdie, Forecast Official of the Weather Bureau, was appointed "Honorary Lecturer on Meteorology, in the University, for the academic year 1899–1900." Prof. A. O. Leuschner, at the head of the department of civil engineering and astronomy, upon learning of this appointment, added: "I hope that we may now succeed in building up a department of meteorology in the University." We can not doubt but that many students of the subject will listen to Mr. McAdie's course of lectures, and that much good will be done thereby, but if a department of meteorology is to be built up in the University it must be done by the consecration of one's whole time and energy to that work, as is shown by the pioneer work done in this line by Prof. Wm. M. Davis and R. DeC. Ward, at Harvard University.

We notice that by a recent decision of the faculty of Harvard, meteorology has been placed on the list of subjects that may be offered for examination by young men who desire to enter the freshman class of that institution. This is in accord with the growing tendency to introduce the study of elementary meteorology into the high schools and preparatory collegiate academies of the country.

During the past year Dr. O. L. Fassig has not only completed his own studies for the degree of Ph. D., being the